WHAT IS CLAIMED IS:

1. A method for authenticating products comprising:

a. sampling a representative series of randomly selected units of known products from a homonymous lot of known products manufactured in a single production cycle from identical raw materials and optional intermediates;

b. obtaining transmitted luminescent and Raman scattering values for the series of known products to produce a signature for the known product;

c. sampling an unknown product to obtain transmitted luminescent and Raman scattering values for the unknown product to produce a signature for the unknown product; and

d. comparing the signature of the product and the unknown product to determine if the unknown product is the same as the known product.

2. The method according to claim 1 wherein the unknown product is packaged in a container at least partially constructed of a material which is transparent to the spectral band of probing radiation and the spectral band of analyzed radiation.

3. The method according to claim 2 wherein the container includes a window made of material transparent to

the spectral band of probing radiation and the spectral band of analyzed radiation.

4. The method according to claim 2 wherein the container includes a prism made of a material transparent to the spectral band of probing radiation and the spectral band of analyzed radiation.

5. The method according to claim 2 wherein the container includes a wave guide transparent to the spectral band of probing radiation and the spectral band of analyzed radiation.

6. The method according to claim 2 wherein the container includes a cell transparent to the spectral band of probing radiation and the spectral band of analyzed radiation.

7. The method according to claim 1 wherein the signature of the known product is presented as a code that can be read.

8. The method according to claim 7 wherein the code is selected from the group consisting of digital codes, magnetic codes, holographic codes, and graphic codes.

9. The method according to claim 7 wherein the container is equipped with a card bearing the signature of the known product.

10. The method according to claim 1 wherein the known product is selected from the group consisting of

chemicals, biochemical's and petrochemicals, foodstuffs, perfumes, pharmaceutics, minerals and any other products and/or materials, which contain components absorbing and/or emitting light radiation.